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SPE

There is still time to register for the <u>SPE Low Permeability Symposium</u>! The Symposium is a great way to connect with other E&P professionals and increase your technical knowledge of low permeability unconventional plays.

This month's <u>General Meeting</u> features Mike Vincent, who will be discussing the need for multi-disciplinary teams to optimize resource plays.

We also have a Completions Study Group this month, and an upcoming Golf Tournament in August.

May wraps up the 2015/2016 Season. At last month's General Meeting, a 2016/2017 Board was elected. Our new Section Officers are:

- Section Chair: Julianna Sipeki
- Program Chair: Wendell SalasTreasurer: Megan Powell
- Vice-Treasurer: Deb Ryan
- Secretary: Kelly Wilson
- · Membership: Clint Frost
- Community Outreach: Mido Gbededo
- · One-Year Director: Leen Weijers

The Board and volunteers will be working on next season's programming during the summer months. There are plenty of opportunities to get involved! If you are interested in volunteering with the SPE Denver section, please join us on June 1st, for a happy hour and a presentation on how you can get involved!

Cheers,

Marija Mircevska

**Newsletter Editor** 

### **SPE Low Permeability Symposium**

5-6 May 2016 | Denver, Colorado

**Hyatt Regency Denver at Colorado Convention Center** 



SPE is excited to hold the SPE Low Permeability Symposium in Denver this year on 5–6 May. This symposium is focused on education for our members, focusing on increasing efficiency, lowering finding costs, and also highlighting areas where there are ongoing studies of low permeability reservoir characterization and performance.

Topics that will be covered include:

- Hydraulic fracturing themes placement, refraccing, fluids, surfactant and proppants
- Advances in Petrophyscis for low perm reservoirs
- Imaging of tight rocks

- PVT analysis
- Well performance and production data optimization

The symposium is delivering these topics through a range of forums and sessions:

- Opening Plenary Session: Panel "Increasing Completion Efficiency in Today's Difficult Operating Environment"
- Keynote Lunches: Alex Epstein "The Moral Case for Fossil Fuels" and Awards Lunch with Helge Hove Haldorsen
- Technical program
- Education Track (included with full registration or can attend on \$75 day pass)
- Short Courses

The Low Perm Symposium is a great way to connect with other E&P professionals and increase your technical knowledge of low permeability unconventional plays. Don't miss this opportunity. For further information about any part of the Symposium program go to <a href="https://www.spelps.org">www.spelps.org</a> for more details.

May 3, 2016

#### **GENERAL MEETING**

## All Hands on Deck! Multi-Disciplinary Teams Are Needed to Optimize Resource Plays!

Mike Vincent

Oenver Athletic Club

May 18, 2016, 11:30 AM - 1:30 PM

#### Tickets:

Members \$25 Non-Members \$35 Walk-Ins \$40

### **Register Now**

**Abstract:** Despite our industry's fantastic success developing resource plays, we are FAR from optimized.

Consider some evidence:

- 30% of our perf clusters are not producing measurable hydrocarbons
- Our propped fracs are collapsing and we don't know why
- Refracs work in most resource plays
- Our designed frac lengths are often much greater than our ultimate well spacing
- We often mathematically space our perforations failing to honor petrophysics
- The success of vertical downspacing demonstrates our failure to drain thick sections from horizontal wells

The roles of petrophysicists, geologists, geophysicists, reservoir engineers, and completion engineers continue to evolve. Many of our traditional assumptions and interpretation techniques are inappropriate in this new world with ultra-tight, laminated reservoirs. Our traditional approach of analyzing decline curves from individual wells is entirely unsuited to our current problem.

#### In this Issue...

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# Thanks to this Month's Newsletter Sponsor

There is far too much ambiguity, with ill-defined, non-unique interpretations. For instance, from a single-well analysis, we typically cannot determine whether a steep decline curve should be attributed to poor reservoir quality, or collapse of hydraulic fracs.

Mike will highlight several datasets where "experts" in one discipline misinterpreted the data and made the wrong decisions — followed by more encouraging examples in which the knowledge of integrated teams was applied, resulting in significant improvements in well profitability. Mike will speculate how our roles must continue to evolve to effectively develop resource plays. We're all in this together!



Biography: Mike Vincent is a consulting engineer with more than 25 years of experience, specializing in fracture optimization, and training. After completing his degree at the Colorado School of Mines, he worked with Amoco, ARCO and CARBO prior to becoming an independent consultant in 1996. An active member of the Society of Petroleum Engineers, Vincent has authored more than 30 technical papers and serves as a technical editor for three SPE journals. Mike frequently lectures at universities

and presents fracturing schools to numerous companies and organizations, and has served as an SPE Distinguished Lecturer and Distinguished Author. For more information, contact mike@fracwell.com

#### COMPLETIONS STUDY GROUP

Determining the Effectiveness of Isolation
Techniques Using Completion Diagnostics and
Production Analysis (SPE 179175)

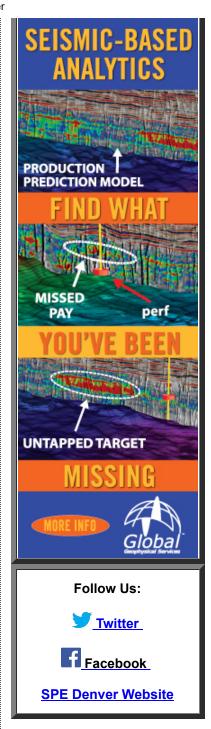
D.J. Snyder, Packers Plus Energy Services

- April 19, 2016, 11:30 AM 1:00 PM
- P Halliburton, 1125 17th Street, 19th Floor Training Room

#### Register Here

**Abstract:** The development of unconventional resources in North America has led to the implementation of a variety of drilling and hydraulic fracturing techniques. This paper reviews completion diagnostic data from over 50 wells in the Anadarko and Williston Basins that were evaluated by a multidisciplinary team. Production analyses were conducted in conjunction with the diagnostic data to further qualify the effectiveness of different completion practices.

Stimulation diagnostics including proppant tracers, microseismic data, and permanently installed fiber optic sensors are available to assist with identifying fracture growth both within and outside of a targeted interval. Wells in this study will utilize proppant tracers for the evaluation of stage coverage and isolation effectiveness.



This paper specifically focuses on isolation techniques used during hydraulic fracturing of uncemented multistage horizontal wells, including swellable packers, and single and dual-element hydromechanical packers. Stimulation coverage and zonal containment for these isolation techniques were evaluated, and the results demonstrate how different isolation techniques can affect production.

This study shows how operating conditions may also affect the integrity of certain isolation techniques, as results for the most effective isolation techniques vary by basin. These operating variations, among others, are examined in this paper as a possible contributing factor for the loss of annular isolation and corresponding production decreases.

Isolation techniques are often implemented in drilling and completion programs with insufficient data or field trials. Most of these decisions are made based on perceived cost optimization rather than the overall completion effectiveness and performance of the well. This study is the first of its kind using a macroscopic analysis of completion diagnostics and production data over a large data set for the evaluation of isolation techniques.

This study has clearly shown us that with some additional enhancement intra-stage diversion can be used to optimize stage spacing without compromising production. The post-frac fracture modeling analysis along with the Fibercoil results including warmback analysis and production for the two wells is presented.

**Biography:** In the past 9 years with Packers Plus, DJ Snyder has worked in various research and development, operations and sales support roles in every major US Unconventional Basin and Alaska. He has played a key role in deploying new completions technologies in the U.S. for Packers Plus. Most recently he's helped develop the ePlus Retina System and Packers Plus' QuickFRAC Systems. DJ has authored 22 technical papers, with 3 being republished in JPT, World Oil, and American Oil and Gas Reporter. There has been a master's thesis written about his work and two more master's thesis' reviewing parts of his past work. He currently serves on the board of directors with SPE YP in Oklahoma City and is a member of many other industry organizations. He has a B.Sc. in Petroleum Engineering from Montana Tech.

#### **GOLF TOURNAMENT**

# The Denver Section of the Society of Petroleum Engineers is pleased to announce our annual golf tournament!



Friday, August 19, 2016

- Lunch and dinner are included.
- Separate award ceremonies and raffle drawings take place immediately following each flight, thereby eliminating the need to return in the evening to collect prizes.

#### **Details and Registation**

The proceeds from the tournament benefit the SPE Scholarship

Fund and are distributed to petroleum engineering students in the Rocky Mountain Region. Last year's tournament resulted in a donation of \$23,000!

We constantly strive to exceed the previous years' donations and to do so, we will need the continued support of your organization. We offer four levels of sponsorship donation. Due to the downturn in the industry we've reduced those levels.

Those companies generously donating \$1,000 or more will receive the ultimate recognition as a Platinum Sponsor. Likewise, companies donating \$500, \$300 or \$150 will be recognized as Gold, Silver, or Bronze sponsors.

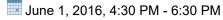
The sponsoring companies will be recognized at the tournament and in the SPE Newsletter.

The facilities at The Ridge at Castle Pines North are spectacular and challenging. We hope that you can be a part of the 2016 SPE Golf Tournament with both your contribution and your participation. Your support is truly appreciated.

For any questions or concerns with registration, please contact Erin McEvers.

#### **VOLUNTEER DRIVE**

Join the SPE Denver Section Board members for a presentation on ways that you can get involved with the Section! Creative input and suggestions are welcome!



Oenver Athletic Club



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